

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Ruman et al.
Serial No. 10/038,796
Filed December 31, 2001
Confirmation No. 2941

Art Unit 3761

For ABSORBENT ARTICLE WITH IMPROVED FASTENING SYSTEM AND
METHOD OF FASTENING THEREOF
Examiner Karin M. Reichle

AMENDED APPEAL BRIEF

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AMENDED APPEAL BRIEF

This is an appeal from the rejection of the claims pending in the above-identified application, which had been previously rejected, as set forth in the Office action dated September 6, 2005. A Notice of Appeal was filed on January 3, 2006.

This Amended Appeal Brief is being submitted in response to the Notification of Non-Complaint Appeal Brief dated October 11, 2006.

I. REAL PARTY IN INTEREST

The real party in interest in connection with the present appeal is Kimberly-Clark Worldwide, Inc. of 401 N. Lake Street, Neenah, Wisconsin 54957-0349, a corporation of the state of Delaware, owner of a 100 percent interest in the pending application.

II. RELATED APPEALS AND INTERFERENCES

Appeals have been filed in U.S. Patent Application Serial No. 10/038,818 entitled MECHANICAL FASTENING SYSTEM FOR AN ABSORBENT ARTICLE and U.S. Patent Application Serial No. 10/159,076 entitled APPARATUS AND METHOD FOR SECURING ENGAGEMENT BETWEEN FASTENING COMPONENTS OF PRE-FASTENED

GARMENTS, which has been assigned Appeal No. 2006-0544. These applications have common subject matter with the case at hand, and Kimberly-Clark Worldwide, Inc. is owner of a 100 percent interest in these applications.

III. STATUS OF CLAIMS

Claims 17-19, 25, 27, 30, and 31 are currently pending in the application. All of the pending claims stand rejected. Claims 1-16, 20-24, 26, 28, and 29 have been cancelled. A copy of the pending claims appears in the Claims Appendix of this Brief.

Claims 17-19, 25, 27, 30, and 31 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,386,595 (Kuen et al.). Claims 25 and 27 stand further rejected under 35 U.S.C. §103(a) as being obvious in view of U.S. Patent No. 5,693,401 (Sommers et al.).

The rejections of claims 17-19, 25, 27, 30, and 31 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been filed after the mailing of the Office action from which this appeal has been taken.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following summary correlates claim elements to specific embodiments described in the application specification, but does not in any manner limit claim interpretation. Rather, the following summary is provided only to facilitate the Board's understanding of the subject matter of this appeal.

Claim 25 is directed to a method for securing engagement between fastening components 82-85 of an article 20 used for personal wear. See page 24, lines 7-15 and Figs. 1-5. The fastening components 82-85 comprise a hook component and a loop component. See page 24, lines 16-21 and Figs. 1-5. The loop component 84, 85 comprises a stretchable loop material secured to a stretchable substrate. See page 25, lines 18-22. The hook component 82, 83 is capable of fastening engagement with the loop material of the loop component. See page 24, lines 13-15 and Figs. 1, 4, and 7. The method comprises the steps of arranging the fastening components 82-85 in at least partially opposed relationship with each other. See page 31, lines 20-23 and Fig. 7. The fastening components 82-85 are engaged with each other to define an engagement seam 88 whereby the hook component 82, 83 fastenably engages the loop material of the loop component 84, 85. See page 31, lines 20-25 and Fig. 7. The loop component 84, 85 is contracted relative to the hook component 82, 83 at the engagement seam 88 following engagement of the fastening components to thereby urge sliding movement of one fastening component relative to the other fastening component at the engagement seam to promote increased engagement between the fastening components at the engagement seam. See page 32, lines 5-23. The contraction occurs at the seam 88, and includes contracting of the stretchable loop material and contracting of the stretchable substrate. See page 33, lines 14-19.

Claim 30 is directed to a method of securing an absorbent article 20 in a fastened configuration for personal wear. See page 24, lines 7-15 and Figs. 1-5. The method comprises forming the absorbent article 20 to have a body 32 having first and second end regions 22, 24. See page 11, lines 15-17 and

Figs. 1-5. The body 32 comprises an inner layer 28 for contact with a wearer's skin wherein at least a portion of the inner layer is liquid permeable, an outer layer 30 in opposed relation with the inner layer (see page 11, lines 15-19 and Figs. 1-5), and an absorbent layer 44 disposed between the inner layer and the outer layer. See page 12, lines 3-7 and Fig. 3. A mechanical fastening system 80 is positioned on the body 32 (see page 24, lines 7-8 and Figs. 1-5) and comprises a loop component 84, 85 and a hook component 82, 83. See page 24, lines 16-21 and Figs. 1-5. The loop component 84, 85 comprises an elastomeric loop material secured to an elastomeric substrate such that the loop component is elastomeric at the loop material. See page 25, lines 18-22. The hook component 82, 83 is fastenably engageable with the loop material of the loop component 84, 85. See page 24, lines 13-15 and Figs. 1, 4, and 7. The method also comprises stretching the loop component 84, 85 at the loop material which includes stretching both the loop material and the substrate. See page 32, lines 7-10. The hook component 82, 83 and the loop component 84, 85 are engaged whereby the hook component fastenably engages the loop material of the loop component. See page 32, lines 10-11. The loop component 84, 85 is allowed to retract at the loop material which includes retraction of the loop material and retraction of the substrate. See page 32, lines 11-14.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Appellants appeal the rejection of claims 17-19, 25, 27, 30, and 31 under U.S.C. §102 (b) as being anticipated by U.S. Patent No. 5,386,595 (Kuen et al.).

B. Appellants appeal the rejections of claims 25 and 27 under 35 U.S.C. §103(a) as being obvious in view of U.S. Patent No. 5,693,401 (Sommers et al.).

VII. ARGUMENT

A. Claims 17-19, 25, 27, 30, and 31 are unanticipated by U.S. Patent No. 5,386,595 (Kuen et al.).

CLAIM 25

Applicants have invented a unique method for securing an absorbent article with superior gripping strength. It reduces "pop opens" of training pants when a child stoops or bends, overcoming a long felt need as known to those skilled in the art. On engagement with a hook component, the loop component has a more open structure with greater spacing between loops (because of its stretched or expanded condition) which allows individual hooks to better penetrate the loop component, and allows more hooks to align with loops. Upon contraction, relative sliding movement between the fastening components causes more of the hooks to engage with loops. The sliding force is larger because of contraction, including particularly contraction within the hook/loop engagement region. The grip is enhanced because the contracted loop component reaches a tighter structure with decreased spacing between loops.

The prior art of record has nothing to do with, and has no disclosure of, any method for achieving a more secure connection of hook and loop fastening components with each other. There is no suggestion of contracting following engagement to improve the strength of the connection.

Claim 25 recites:

A method for securing engagement between fastening components of an article used for personal wear, the fastening components comprising a hook component and a loop component, the loop component comprising a stretchable loop material secured to a stretchable substrate, the hook component being capable of fastening engagement with the loop material of the loop component, the method comprising the steps of:

arranging the fastening components in at least partially opposed relationship with each other;

engaging the fastening components with each other to define an engagement seam whereby the hook component fastenably engages the loop material of the loop component; and

contracting said loop component relative to said hook component at said engagement seam following engagement of the fastening components to thereby urge sliding movement of one fastening component relative to the other fastening component at the engagement seam to promote increased engagement between the fastening components at the engagement seam, said contracting including contracting of said stretchable loop material and contracting of said stretchable substrate.

To anticipate the claimed subject matter, a single cited reference must disclose, explicitly or inherently, each and every element of the claim.¹ Claim 25 is unanticipated by and patentable over Kuen et al. in that Kuen fails to show or suggest a method including contracting a loop component relative to a hook component **at the engagement seam, following**

¹ M.P.E.P. §2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

engagement of the fastening components to promote increased engagement between the fastening components.

Kuen et al. show in Fig. 7 an attachment system having stretchable straps (76A, 76B) each having a looped face (78). End portions (53, 54) of each strap are pressed against corresponding hook patches (72A, 72B, 74A, 74B). Kuen et al.'s attachment procedure, described at column 10, line 58 through column 11, line 30, is a conventional attachment of hook and loop fasteners. The purpose of the straps being stretchable is so that they can provide the resilient force normally supplied by a waistband for holding the garment on the body, not for achieving a better interconnection of the looped face of the straps with the hook patches. The Examiner asserts that this section of Kuen et al. discloses the step of contracting the loop component after it is engaged with the hook component. No such thing is ever stated or implied in this section.

The Examiner's position is apparently that because the strap member is stretchable and applies a tension to the hook and loop connection, that the claimed method steps are disclosed. Kuen et al. nowhere says the loop material (located at the very ends of the strap) that is engaged with the hook material is stretched. Claim 1 is specific in requiring that the contraction of the loop component which occurs is "**at the engagement seam**" and **after** engagement of the loop component with the hook component. Contraction at the engagement seam is not disclosed by pulling from a strap outside the location of the connection of the hook component and the loop component (i.e., the engagement seam). Kuen et al. discloses no more than pulling on the seam from outside the area of engagement of the hook component and loop component.

Claim 25 further requires that both the stretchable loop material and a stretchable substrate to which is it attached be contracted. Kuen et al. do not disclose this. In the section cited by the Examiner (col. 10, l. 58 - col. 11, l. 30), there is no statement or suggestion that the loop material attachment pads 42A, 42B, 44A, 44B are ever stretched. The disclosure of Fig. 7 does not disclose a substrate for the loop material.

The importance of achieving a good connection of the hook components and loop components is addressed by Kuen et al. However, the use of the applicants' claimed method in which the loop component is contracted **after** being brought into engagement with the hook components is never mentioned or suggested. Kuen et al. discuss the importance of selecting a type of hook and loop fastener that has a sufficiently aggressive connection (col. 9, l. 51 - col. 10, l. 47), and the alignment of hooks of the hook component and loops of the loop component at right angles (col. 11, ll. 31-46; col. 12, l. 65 - col. 13, l. 22). A discussion of applicants' claimed method (i.e., contracting the loop component in the seam after engagement with the hook component) is conspicuously absent from this explicit treatment of the subject of good hook and loop fastener securement by Kuen et al.

The Examiner appears to recognize that Kuen et al. fails to disclose the claimed method by tacking on a statement at the end of her rejection that the method steps are inherently disclosed. (See, Final Office action, p. 4, para. 4). To establish inherency, the prior art "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact

that a certain thing may result from a given set of circumstances is not sufficient."² Such evidence is clearly absent in this case.

Kuen et al.'s attachment procedure, described at column 10, line 58 through column 11, line 30, lacks any clarity that the claimed method steps **necessarily** occur when the method of securement described by Kuen et al. is being carried out. When Kuen et al. talk about "stretching or relaxing the strap members 40 to obtain the desired tension" (col. 10, ll. 66-68), they are clearly talking about the tension applied to the waist for holding the garment on the wearer and are saying nothing about the quality of the hook and loop fastener connection. The assertion that Kuen et al. must necessarily teach the engagement of a loop component and a hook component followed by contraction of the loop component thereby urge sliding movement of one fastening component relative to the other fastening component at the engagement seam to promote increased engagement between the fastening components at the engagement seam, is no more than unsupported, hindsight speculation by the Examiner.

Since the disclosure of Kuen et al. neither discloses nor suggests the method recited in claim 25, Applicants request that the Examiner's rejection be reversed.

CLAIM 27

Claim 27 depends directly from claim 25 and is patentable over Kuen et al. for the same reasons that claim 25 is patentable. Moreover, claim 27 further requires stretching the loop component prior to engaging the fastening components with

² M.P.E.P. §2112 citing *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

each other such that the portion of the loop component to be secured to the hook component is stretched, and releasing the stretched loop component following engagement such that the loop component retracts relative to the hook component at the engagement seam. The stretching includes stretching of the stretchable loop material and stretching of the stretchable substrate. Kuen et al. also fail to show or suggest these additional features.

The Examiner baldly asserts that there is a loop material and substrate and that they are both capable of stretching. (Final Office action, p. 3, para. 4). No effort is made to explain this assertion by pointing out what is the substrate and what is the loop material. The embodiment of Kuen et al. shown in Fig. 7 does not appear to have a substrate. Applicants submit that a much better connection is made if the loop material is backed by an elastic substrate not shown or suggested by Kuen et al. Thus, for these additional reasons, the rejection of claim 27 should be withdrawn.

CLAIM 30

Claim 30 recites, among other elements:

positioning a mechanical fastening system on the body, the mechanical fastening system comprising a loop component and a hook component, the loop component comprising an elastomeric loop material secured to an elastomeric substrate such that the loop component is elastomeric at the loop material, the hook component being fastenably engageable with the loop material of the loop component;

stretching the loop component at the loop material which includes stretching both said loop material and said substrate;

engaging the hook component and the loop component whereby the hook component fastenably engages the loop material of the loop component; and

allowing the loop component to retract at the loop material which includes retraction of said loop material and retraction of said substrate.

Kuen et al. fail to show or suggest a method including stretching the loop component at the loop material, which includes stretching both a loop material and a substrate. Kuen et al. fail to show a step of allowing the loop component to retract at the loop material which includes retraction of said loop material and retraction of said substrate. As discussed above, Kuen et al. show a conventional method for attaching hook and loop fasteners.

The Examiner baldly asserts that there is a loop material and substrate and that they are both capable of stretching. (Final Office action, p. 3, para. 4). No effort is made to explain this assertion by pointing out what is the substrate and what is the loop material. The embodiment of Kuen et al. shown in Fig. 7 does not appear to have a loop material and a substrate. Applicants submit that a much better connection is made if the loop material is backed by an elastic substrate not shown or suggested by Kuen et al.

Since the disclosure of Kuen et al. neither discloses nor suggests the method recited in claim 30, Applicants request that the rejection be reversed.

Claims 17-19 and 31 each depend from claim 30 and are patentable for, among other reasons, the same reason that claim

30 is patentable. Accordingly, applicants respectfully request that the rejection of claims 17-19 and 31 be reversed.

B. Claims 25 and 27 are submitted as being nonobvious in view of U.S. Patent No. 5,693,401 (Sommers et al.).

CLAIM 25

Sommers et al. disclose a surgical glove retainer comprising an elastic strip (10) having a hook material (30) at one end and a loop material (26) at the opposite end. The hook and loop materials are attached to the elastic strip by sewing. In use, the elastic strip (10) is stretched about the wearer's forearm/wrist, and the hook material is brought into contact with the loop material. The **elastic strip (10) is then allowed to retract** to form a tight yet non-restrictive fit around the wearer's forearm/wrist (see column 10, lines 28-34). The function of the elastic strip is to apply a gripping force on the glove and underlying wrist. Neither the loop material nor the hook material is disclosed as stretching or contracting.

Sommers et al. fail to show or suggest a step of contracting a loop component relative to a hook component to promote increased engagement between the fastening components at the engagement seam, wherein that includes contracting a stretchable loop material and contracting a stretchable substrate. Nowhere in the Sommers et al. patent is there an appreciation or concern for increasing engagement and gripping strength. Nowhere does it suggest that loop material contracts, retracts, or slides relative to hook material at the region of engagement. Sommers et al. disclose only a conventional use of hook and loop fasteners by stretching the strip in an intermediate region between the hook component and a corresponding region of engagement on the loop component.

Unlike applicants' method, the sliding force between the fastening components is not increased by contraction from both a loop material and a substrate as in the present invention. Thus it fails to achieve enhancement to gripping strength. Neither does an embodiment of Sommers et al. mentioned briefly at column 7, lines 10-14 show nor suggest the claimed invention. That requires an elastic strip which is "loopy enough" such that separate attachment of loop material can be dispensed with.

The Examiner admits that Sommers et al. fail to explicitly disclose contraction of the loop component at the seam. (Final Office action, p. 4, para. 6). However, the Examiner goes on to assert, in essence, that it is well known to stretch an elastic strip (including a loop component associated therewith), bring it into engagement with the other end to form a seam, and releasing the elastic strip so that the loop component contracts at the seam. *Id.*

Applicants dispute that it is obvious³ or inherent from Sommers et al. to use the claimed method in which the loop component is contracted at the seam after it is engaged with the hook component. The Examiner has replaced teaching from the prior art with speculation based on nothing more than, apparently, personal experience or hindsight reasoning from applicant's disclosure. The elasticity of the strip in Sommers is for obtaining a tight, but givable closure of the surgeon's glove. (Col. 10, ll. 25-40). On the contrary, applicants believe little if any stretching is occurring at the ends of the elastic strip of Sommers et al. when it is wrapped around

³ Presumably, the Examiner means to say inherent since there is no second reference being combined for an obviousness rejection.

the wrist. In the illustrated embodiment of Sommers et al., it is most likely that the patch of loop material 26 is not very elastic and does not stretch when the elastic strip 10 is stretched. It is believed that stretching of the elastic strip is largely if not exclusively confined to regions of the strap between the ends that are being grasped when the elastic strip is wrapped around the wrist. In any event, there is nothing in Sommers et al. that would lead one to believe that the performance of applicants' claimed steps necessarily follows from the disclosed method. Failing this, there can be no inherent disclosure of applicants' method.

If it were obvious or inherent to achieve better connection in the way claimed by applicants in view of the teaching of Sommers et al., it would have been used. Applicants' method realizes a substantial benefit in obtaining a superior closure of a hook and loop fastener seam without using hook and loop fasteners constructed for an aggressive connection (that can be hard to release when desired). To applicants knowledge, no such benefit has heretofore ever been realized.

Accordingly, reversal of the rejection of claim 25 as being obvious in view of Sommers et al. is requested.

VIII. CONCLUSION

For the reasons stated above, appellant respectfully request that the Office's rejections be reversed and that claims 17-19, 25, 27, 30, and 31 be allowed.

While no fee is believed due at this time, the Commissioner is authorized to charge any fee due to Deposit Account No. 19-1345 in the name of Senniger, Powers.

Respectfully submitted,



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CLAIMS APPENDIX

17. The method of claim 30 wherein stretching the loop component is done manually.

18. The method of claim 30 wherein the step of stretching the loop component comprises stretching said loop component by about 150 to 300 percent.

19. The method of claim 30 wherein the step of stretching the loop component comprises stretching said loop component by about 300 to 450 percent.

25. A method for securing engagement between fastening components of an article used for personal wear, the fastening components comprising a hook component and a loop component, the loop component comprising a stretchable loop material secured to a stretchable substrate, the hook component being capable of fastening engagement with the loop material of the loop component, the method comprising the steps of:

arranging the fastening components in at least partially opposed relationship with each other;

engaging the fastening components with each other to define an engagement seam whereby the hook component fastenably engages the loop material of the loop component; and

contracting said loop component relative to said hook component at said engagement seam following engagement of the fastening components to thereby urge sliding movement of one fastening component relative to the other fastening component at the engagement seam to promote increased engagement between the fastening components at the engagement seam, said contracting including contracting of said stretchable loop material and contracting of said stretchable substrate.

27. The method set forth in claim 25 wherein said method further comprises stretching said loop component prior to engaging the fastening components with each other such that the portion of the loop component to be secured to the hook component is stretched, wherein said stretching includes stretching of said stretchable loop material and stretching of said stretchable substrate, said urging step comprising releasing said loop component following engagement of the fastening components such that said loop component retracts relative to said hook component at the engagement seam.

30. A method of securing an absorbent article in a fastened configuration for personal wear, said method comprising:

forming an absorbent article to have a body having first and second end regions, the body comprising an inner layer for contact with a wearer's skin wherein at least a portion of said inner layer is liquid permeable, an outer layer in opposed relation with the inner layer, and an absorbent layer disposed between the inner layer and the outer layer;

positioning a mechanical fastening system on the body, the mechanical fastening system comprising a loop component and a hook component, the loop component comprising an elastomeric loop material secured to an elastomeric substrate such that the loop component is elastomeric at the loop material, the hook component being fastenably engageable with the loop material of the loop component;

stretching the loop component at the loop material which includes stretching both said loop material and said substrate;

engaging the hook component and the loop component whereby the hook component fastenably engages the loop material of the loop component; and

allowing the loop component to retract at the loop material which includes retraction of said loop material and retraction of said substrate.

31. The method of claim 30 wherein said elastomeric loop component has a stretchability of at least about 150 percent, the step of stretching the loop component comprising stretching said loop component by up to about the stretchability of said loop component.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.